

REMARKS

Claims 18-35 are pending in this application. Claims 20, 24, 26 and 28 have been amended, and Claims 31-35 have been added. The Applicants respectfully request reconsideration and review of the application as amended above in light of the following remarks.

The Examiner rejected Claims 18-30 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-8 of U.S. Patent No. 6,327,812. The Examiner stated that a terminal disclaimer in compliance with 37 C.F.R. § 1.321(c) may be used to overcome an actual or provisional rejection based on non-statutory double patenting and stated that the terminal disclaimer filed by Applicants on December 23, 2002 did not comply with 37 C.F.R. § 1.321 (b) and/or (c). Although the Applicants assert that the terminal disclaimer filed on December 23, 2002 complies with all sections of 37 C.F.R. § 1.321, the Applicants will submit another terminal disclaimer when the Examiner places the pending claims in this application in condition for allowance.

Before addressing the merits of the rejections based on prior art, the Applicants provide the following general description of the invention. The present invention is directed to a method of sanitizing an enclosed space. According to an embodiment of the invention, the method begins by preparing an enclosed space for exposure to a high temperature gas by removing or protecting all heat sensitive items. At least one ingress duct is introduced into the interior of the enclosed space. An environmentally acceptable gas, such as air or nitrogen, is heated to a temperature lethal to the undesirable organisms. The heated gas is directed into the enclosed space through the ingress duct for a time sufficient to raise the temperature of the enclosed space to the lethal temperature. The organisms are terminated by the gas maintained at the lethal temperature.

In one embodiment of the invention, the heated gas and the dead organisms are extracted from the enclosure by an extraction unit. Thus, not only are the undesirable

organisms killed within the enclosed space, the residue of the destroyed organisms are removed from the enclosed space as well, thereby eliminating a source of allergen that can cause additional health problems to occupants of the space.

In another embodiment of the invention, a plurality of temperature indicating probes are disposed within the enclosed structure at various locations, such as onto the surface of a wall, floor or other space, or inserted through a structure into an interior space, e.g., within a wall cavity or crawl space. In yet another embodiment, the temperature within the enclosed structure is monitored from the probes while the heated gas is introduced into the enclosed space, to thereby provide accurate information regarding the temperature throughout the enclosed structure and to ensure that the enclosed structure is brought to the lethal temperature. Further, if the enclosed space is not brought to the lethal temperature, to ensure that the space is subsequently brought to the lethal temperature, an ingress or egress duct can be repositioned.

The Examiner rejected Claims 18-30 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 4,817,329 by Forbes (hereinafter "Forbes"). This rejection is respectfully traversed.

Forbes is directed to a method of treating a region infested by insects by subjecting the region to hot gases to raise the region temperature to a desired level. While Forbes describes the method as applicable to exterminating all kinds of insects, the reference specifically discusses extermination of drywood termites (*Incistermes Minor*) that may be present in the interior of a wooden post. Instead of using temperature probes to measure the temperature within the region, Forbes suggests that an estimation of the temperature within the region is sufficient. The estimation of the temperature within the region is made by controlling the temperature of the source gas and the duration of time that the heated source gas is exposed to the region. The temperature of the source gas and the duration of time that the source gas is exposed to the region is determined by an examination of known thermal gradients. (See Forbes 4:36-64.)

But, Forbes does not disclose "monitoring the temperature within said enclosed structure detected in real time," as defined in Claims 20 and 26. Indeed, because Forbes is directed to exterminating termites that reside in the ground, below concrete slabs, in carpets, and within wooden posts, it is either impractical or simply not possible to monitor the temperature in the region where the termites are to be exterminated. (See Forbes 3:33-39 and 54-65, and Figs. 3, 7 and 8.) For example, to monitor the temperature in soil, several probes would have to be placed at different depths and locations within the soil, which would be cost prohibitive and which is why Forbes relies on known thermal gradients – not probes. Forbes states that, with respect to exterminating termites within wooden posts, it merely discloses a method used to treat lumber for foreign insects that is applied for a different purpose, i.e., for use in specified regions of a dwelling. The lumber treatment method clearly did not involve using a probe to measure the temperature of each piece of lumber, as it would be impractical to do so. Thus, an application of the lumber method to specified regions, as disclosed in Forbes, likewise would not involve the use of temperature probes. Forbes simply does not anywhere disclose the use of temperature probes. The Examiner even concedes that a plurality of probes are not disclosed by stating that "it would have been obvious" to use a plurality of probes because Forbes discloses one probe – but does not show where the purported probe is disclosed in Forbes.

The Examiner states that because "Forbes discloses specific temperatures," including those within wood, and that because Forbes states that the temperature rises in wood after the gas is turned off, the temperature must be monitored. The Applicants respectfully disagree. Forbes explicitly states that "**the gas temperature** must be significantly higher than the desired temperature." (See Forbes 45-50.) Thus, as provided above, Forbes controls the temperature of the source gas by controlling the temperature the gas is heated to and releases the heated gas into the region. Forbes does not measure the "desired temperature," i.e., the temperature of the region after the heated gas is released into the region.

Further, Forbes states that the temperature is not monitored. Forbes states that one may prematurely stop heating a wooden post before the post reached the desired lethal temperature and rely on the temperature rising after the heating is stopped – but “[u]sually this is not [] done.” (See Forbes 60-63.) Forbes emphasizes that “the certainty of the kill is worth a little more time and fuel.” (Id.) This shows that Forbes does not rely on the rising temperature of the wood and specific wooden post temperatures, which would have to be measured by a probe. Rather, to ensure proper extermination, the wooden post is heated by a source gas whose temperature is maintained at temperatures above the desired lethal temperature within the wooden post, which is provided in the known thermal gradient, for a time period beyond that necessary for extermination.

Thus, by providing the thermal gradients, stating that the gas temperature must be significantly higher than the desired temperature provided in the thermal gradients, and stating that the certainty of the kill is worth more than the extra time and fuel, Forbes shows that it relies on “practical ranges and times” – not monitoring of the temperature within said enclosure, as defined in Claims 20 and 24 – to ensure efficacy. (See Forbes 4:51-53.)

One reason that Forbes can rely on “practical ranges and times” is because it focuses on the extermination of termites. In contrast, the present application is directed to a much broader range of organisms with each having potentially unique temperature/time requirements to achieve complete extermination. Multiple temperature probing within an enclosed structure ensures satisfaction of such requirements. Additionally, many types of organisms such as mold may exist within enclosed spaces inside a structure, such as within a wall space, and probing is therefore necessary to ensure that such spaces are brought to the lethal temperature. The systems and methods defined in the Claims 20 and 26 achieve extermination of these other organisms by monitoring the temperature of the enclosed structure.

As a result, the Applicants submit that Claims 20 and 26 and Claims 21-23 and

27-30, which depend from allowable Claims 20 and 26, respectively, are in condition for allowance. The Applicants request that the Examiner remove this basis for rejection. Further, the Applicants have added new Claims 33 and 35 and submit that, because new Claims 33 and 34 depend from allowable Claims 20 and 26, respectively, Claims 33 and 34 are also in condition for allowance.

Moreover, new dependent Claims 33 and 35 define the step of "moving said at least one ingress duct if there is not a uniform temperature within said enclosure," which is not disclosed anywhere in Forbes. As a result, the methods of Claims 33 and 35 provide an extra measure that may be taken, e.g., moving an ingress duct, to ensure that the enclosed structure reaches a lethal temperature. Forbes, on the other hand, does not provide such an extra measure because Forbes may simply rely on "practical ranges and times" and neither requires nor discloses any monitoring of a region. Thus, Forbes does not disclose the methods defined in Claims 33 and 35, not only because Forbes does not disclose "monitoring" temperature, but because Forbes does not disclose moving ingress ducts to provide an extra measure to ensure a lethal temperature is attained. As a result, the Applicants submit that Claims 33 and 35 are allowable over the cited art not only because they depend from allowable Claims 20 and 26, respectively, but for the reasons provided above.

Claims 18 and 24 define "extracting said heated gas and dead organisms" and "an extraction unit." The Examiner concedes that "Forbes does not disclose an extraction unit in communication with the enclosed structure," and the Applicants therefore submit that Claims 18 and 24, and Claims depending therefrom, are allowable over Forbes. The Applicants request that the Examiner remove this basis for rejection.

The Examiner rejected Claims 18-19 and 20-23 under 35 U.S.C. § 103(a) as unpatentable over Forbes in light of U.S. Patent No. 1,885,854 by Montellano (hereinafter "Montellano"). This rejection is respectfully traversed.

As provided above, Forbes is directed to the extermination of termites, which typically reside in wood and in the ground, by way of a heated gas. Montellano, on the

other hand, is directed to the general extermination of insects by sucking live insects into a suction device. The suction device is generally used indoors, in fans or by curtains – not within the ground or wooden posts.

To sustain a rejection that an invention is “obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would lead a person of ordinary skill in the art to select the references and combine them in a way that would produce the claimed invention.” See Karsten Mfg. Corp. v. Cleveland Golf Co., 242 F.3d 1376, 1385 (Fed. Cir. 2001). In this case, there is no motivation to combine Forbes and Montellano. The purpose of the suction device of Montellano is to kill insects and would run at the same time as the heated gas of Forbes, whose purpose is to kill termites, was directed into the specified region. As a result, the suction device would suction the heated gas from the specified region before the heated gas was applied for a time specified by the known thermal gradients, preventing the heated gas from raising the temperature within the region to the lethal temperature and from exterminating the termites. Moreover, the suction device of Montellano would be rendered utterly useless to exterminate termites, the purpose of Forbes, because termites do not reside in the open but rather in confined areas such as within wooden posts or soil. Obviously, the suction device cannot suck termites from a post or soil. Combining the elements of Montellano and Forbes, therefore, would result in a system that could not kill termites. Because the purpose of Forbes is to kill termites, there would be no motivation to combine Montellano and Forbes.

The Examiner asserts that it would be obvious to combine Montellano and Forbes because Montellano discloses the use of the suction device to purify air. But, Forbes is directed to the extermination of termites – not air purification. Indeed, the specified regions that are infected with termites disclosed in Forbes especially do not require air purification as the termites die within the specified regions, such as within posts or in the ground. The termites are not in the air. Therefore, there is no termite residue in the air and air purification is not necessary. In sum, the Applicants submit

that there is no motivation to combine Montellano and Forbes. The Applicants therefore submit that, on this basis alone, this rejection should be removed.

Moreover, even if it were obvious to combine Montellano and Forbes, the combination would not disclose "extracting . . . **dead** organisms" or an "extraction unit that removes **killed** organisms," as defined in Claims 18 and 24, respectively. As provided above, if Montellano and Forbes were combined, the suction device would run at the same time as the Forbes heated gas was directed into the region – preventing the extermination of any organism by heat. If the suction device were able to extract insects from a region, the insects extracted would be alive – not dead, as defined in the claims. The method and system defined in Claims 18 and 24, on the other hand, kills organisms through heated gas and extracts the heated gas and killed organisms. As a result, the Applicants submit that Claims 18 and 24 and Claims 19 and 25, which depend from allowable Claims 18 and 24, are in condition for allowance. Further, the Applicants submit that new Claims 31-32 and 34 are allowable at least because they depend from allowable Claims 18 and 24, respectively.

In addition, neither Forbes nor Montellano, whether considered separately or in combination, disclose "a plurality of temperature indicating probes," as defined in Claims 31 and 34, respectively, for the reasons provided above. As a result, the Applicants submit that, in addition to being allowable for depending on Claims 18 and 24, Claims 31 and 34 are allowable because neither Forbes nor Montellano disclose "a plurality of temperature indicating probes." Moreover, Claim 32 is allowable, not only for depending on allowable Claim 18, but because neither Forbes nor Montellano disclose "moving said at least one ingress duct if said probes show that there is not a uniform temperature within said enclosure," as defined in Claim 32.

In view of the foregoing, the Applicants respectfully submit that Claims 18-35 are in condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested, and a timely Notice of Allowability is solicited. To the extent it would be helpful to placing this application in condition for allowance, the Applicants

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encourage the Examiner to contact the undersigned counsel for the purpose of conducting a telephonic interview.

To the extent necessary, Applicants petition the Commissioner for a three-month extension of time, extending to September 17, 2003, the period for response to the Office Action dated March 17, 2003. To cover the cost of the petition for an extension of time, the Applicants enclose herewith a check in the amount of \$465.00. Further, an RCE is enclosed. The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0639.

Respectfully submitted,



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Enclosure